

CLAIMS

The following claims are amended as underlined portions.

1. (Amended) A semiconductor device comprising:

a capacitance element one end of which is connected to a power supply voltage;

a first comparator which has two input nodes having opposite polarity to each other and receives a reference voltage and an output of other end of the capacitance element at their inputs to compare the respective voltage values to output a signal indicating a comparison result;

a first resistor element which connects the one side input node and the other side input node of the first comparator; and

wherein the first comparator activates the output signal indicating the comparison result when the voltage difference between the inputted reference voltage and the inputted output of other end of the capacitance element occurs.

2. (Amended) A semiconductor device as defined in claim 1, wherein:

the first comparator is a hysteresis comparator which activates the output signal indicating the comparison result when the voltage difference between the inputted reference voltage and the inputted output of other end of the capacitance element becomes larger than a predetermined hysteresis width.

3. (Amended) A semiconductor device as defined in claim 1, wherein further comprising:

a second and a third resistor elements connected in series between the power supply voltage and the ground terminal to divide the power supply voltage;

a second comparator having two input nodes and receives the voltage divided by the second and the third resistor elements and the reference voltage at its inputs to compare those; and

a logic OR circuit which takes a logic OR operation of the output signal of the first comparator and the output signal of the second comparator.

5. (Amended) A semiconductor device as defined in any of claims 1 to 3, wherein further comprising:

a switching part which switches the value of the output of other end of the capacitance element which is inputted to either of the input nodes of the first comparator to an arbitrary value.

7. (Amended) A semiconductor device comprising:

a first and a second capacitance elements one end of which is connected to a power supply voltage;

a first comparator which has two input nodes having opposite polarity to each other and receives a reference voltage and an output of other end of the first capacitance element at

their inputs to compare the respective voltage values to output a signal indicating a comparison result;

a second comparator which has two input nodes having opposite polarity to each other and receives a reference voltage and an output of other end of the second capacitance element at their inputs to compare the respective voltage values to output a signal indicating a comparison result;

a first and a second resistor elements each of which connects the one side input node and the other side input node of the first and the second comparators, respectively;

a logic OR circuit which takes a logic OR operation of the output signal of the first comparator and the output signal of the second comparator; and

wherein the first and the second comparators respectively activate the output signal indicating the comparison results when the voltage difference between the inputted reference voltage and the inputted output of other end of the capacitance element occurs, and the polarity of the input node which receives the output of other end of the first capacitance element in the first comparator and the polarity of the input node which receives output of other end of the second capacitance element in the second comparator are opposite to each other.

8. (Amended) A semiconductor device as defined in claim 7, wherein:

the first comparator and the second comparator respectively are hysteresis comparators which activates the output signal indicating the comparison result when the voltage difference between the inputted reference voltage and the inputted output of other end of the first capacitance element is larger than a predetermined hysteresis width.

9. (Amended) A semiconductor device as defined in claim 7, wherein further comprising:

a third and a fourth resistor elements connected in series between the power supply voltage and the ground terminal to divide the power supply voltage; and

a third comparator which has two input nodes and compares the voltage which is divided by a third and a fourth resistor elements and the reference voltage to output a signal indicating the comparison result to the logic OR circuit.

11. (Amended) A semiconductor device as defined in any of claims 7 to 9, wherein further comprising:

a switching part which switches the value of the output of other end of the first capacitance element which is inputted to either of the input nodes of the first comparator and the value of the output of other end of the second capacitance element which is inputted to either of the input nodes of the second comparator to an arbitrary value.